

IN THE SPECIFICATION

Please amend the specification as follows.

1. Please substitute the second full paragraph on page 2 with the following paragraph:

It has been unexpectedly discovered by the present inventors that mucosal administration of a heat shock protein peptide, for example mycobacterial ~~HSP65~~ heat shock protein 65 (HSP65), is an effective treatment for vascular disorders, such as atherosclerosis. In one aspect, the invention is directed to a method for treating vascular disorders in a mammal in need of such treatment, comprising orally (or more generally, mucosally) administering to the mammal an effective amount of an agent comprising a heat-shock protein ("HSP"), and/or therapeutically effective fragments or analogs of a heat shock protein. Preferably, the administration is continued for a period of time sufficient to achieve at least one of the following:

- (i) reduction in the level of proinflammatory Th1 cytokines;
- (ii) increase in the level of anti-inflammatory Th2 cytokines; or
- (iii) amelioration, retardation or suppression of at least one clinical or histological symptom of a vascular disorder.

2. Please substitute the paragraph beginning at line 10 on page 13 with the following paragraph.

As used herein the terms "mycobacterial HSP65," "human HSP60," and "chlamydial HSP60" also embrace homologs and alleles of mycobacterial HSP65, human HSP60, and chlamydial HSP60, respectively. In general homologs and alleles typically will share at least 40% nucleotide identity and/or at least 50% amino acid identity to the sequences of specified nucleic acids and polypeptides, respectively. Thus homologs and alleles of mycobacterial HSP65, human HSP60, and chlamydial HSP60 typically will share at least 40% nucleotide identity and/or at least 50% amino acid identity to the sequences of mycobacterial HSP65, human HSP60, and chlamydial HSP60 nucleic acids and polypeptides, respectively. In some instances homologs and alleles will share at least 50% nucleotide identity and/or at least 65%

amino acid identity and in still other instances will share at least 60% nucleotide identity and/or at least 75% amino acid identity. Preferably the homologs and alleles will share at least 80% nucleotide identity and/or at least 90% amino acid identity, and more preferably will share at least 90% nucleotide identity and/or at least 95% amino acid identity. Most preferably the homologs and alleles will share at least 95% nucleotide identity and/or at least 99% amino acid identity. The homology can be calculated using various publicly available software tools developed by the National Center for Biotechnology Information (NCBI, Bethesda, Maryland) that can be obtained through the internet (~~ftp://ncbi.nlm.nih.gov/pub/~~). Exemplary tools include the BLAST system available from the NCBI at ~~http://www.ncbi.nlm.nih.gov~~, used with default settings. Pairwise and ClustalW alignments (BLOSUM30 matrix setting) as well as Kyte-Doolittle hydropathic analysis can be obtained, for example, using the MacVector sequence analysis software (Oxford Molecular Group). Watson-Crick complements of the foregoing nucleic acids also are embraced by the invention. Nonlimiting examples of HSP homologs are provided in Table 1.

3. Please substitute the paragraph beginning at line 12 on page 26 with the following paragraph.

Cytokine ELISAs. A solid-phase enzyme-linked immunoabsorbent assay (ELISA) was used for determination of concentrations of various cytokines. Microtiter plates were coated with anti-cytokine antibodies (100 ng/well) in 0.1 ml of 0.1M sodium bicarbonate, pH 8.2. Plates were incubated for 18 hrs at 25°C. After 3 washes with PBS/Tween-20 (Bio-Rad), pH 7.5, plates were incubated with 3% ~~BSA/PBS~~ bovine serum albumin (BSA)/PBS for 2 hrs at 37°C, washed twice, and 100 µl of diluted serum was added in quadruplicate. The plates were incubated for 2 hrs at 37°C. After three rinses with PBS/Tween-20, plates were incubated with 100 µl/well of peroxidase-conjugated goat anti-rat IgG antibody (Tago, U.S.A.) diluted 1:1000 in 1% BSA/PBS for 1 hr at 25°C. Color reaction was obtained by exposure to D-phenylenediamine (0.4 mg/ml phosphate/citrate buffer, pH 5.0) containing 30% hydrogen peroxide. The reaction was stopped by adding 0.4N H₂SO₄ and OD 492 nm was read on an ELISA reader.

4. Please substitute the paragraph beginning at line 23 on page 26 with the following paragraph.

Plaque Area Measurements. Quantification of atherosclerotic fatty streak lesions was performed by calculation of lesion size in the aortic arch as previously described. Qiao JH et al. (1994) *Arterioscler Thromb* 14:1480-97. In brief, the heart and upper portion of the aorta were perfused with PBS, removed from the animals, and the peripheral fat was carefully removed. The aortic arch section was embedded in ~~OCT~~ optimal cutting temperature (OCT) medium and snap frozen. Every other 10 μm thick section throughout the aortic arch was stained with oil red O and taken for analysis. An observer blinded to the treatment counted lesion areas on a calibrated grid. The total area was reported in μm^2 .